

What we claim is:

1. A voice data communication system comprising:

a switchboard for switching lines;

a network;

interworking units for interworking a protocol on the network  
with a protocol for a line switching; and

IP extension terminals connected to the interworking units  
through the network;

the switchboard having a recognition unit for recognizing a  
communication to be made between the interworking units, and a  
notification unit for notifying the communication to the interworking  
units when the communication is recognized, and

each of the interworking units, provided corresponding to each of  
the IP extension terminals, having a relay route establishing unit for  
establishing a relay route to the interworking unit according to a  
notification from the switchboard, and a route establishing unit for  
establishing a voice data packet route to a route between the IP  
extension terminals through the network by using the relay route in  
response to a route establishment request from the IP extension  
terminals accommodated.

2. The voice data communication system as claimed in claim 1  
wherein when a hooking operation is performed in any of the IP  
extension terminals, the recognition unit of the switchboard recognizes  
the hooking operation through the interworking unit, and the  
notification unit notifies the hooking operation to the voice data packet  
route establishing units of the interworking units, whereby the voice  
data packet route establishing units disconnect the relay route and  
establish a new voice data packet route between the IP extension  
terminals respectively accommodated in the voice data packet route  
establishing units.

3. A voice data communication system comprising:

a switchboard for switching lines;

a network;

interworking units for interworking a protocol on the network

5 with a protocol for a line switching; and

IP extension terminals connected to the interworking units through the network;

the switchboard having a recognition unit for recognizing a communication to be made between the interworking units, and an  
10 notification unit for notifying the communication to the interworking units when the communication is recognized, and

each of the interworking units having a route establishing unit for establishing a voice data packet route to a route between the IP extension terminals through the network according to a route  
15 establishment request from the IP extension terminal accommodated when the notification from the switchboard is received.

4. The voice data communication system as claimed in any one of claims 1 to 3 wherein the recognition unit recognizes the communication between the interworking units by predetermined data  
20 preliminarily registered and data determined at a time of a session initialization.

5. The voice data communication system as claimed in any one of claims 1 to 4 wherein the route establishment request includes an ability information setting message.

25 6. The voice data communication system as claimed in any one of claims 1 to 5 wherein the interworking unit comprises a gateway.

7. The voice data communication system as claimed in any one of claims 1 to 6 wherein the network comprises a LAN or a WAN.